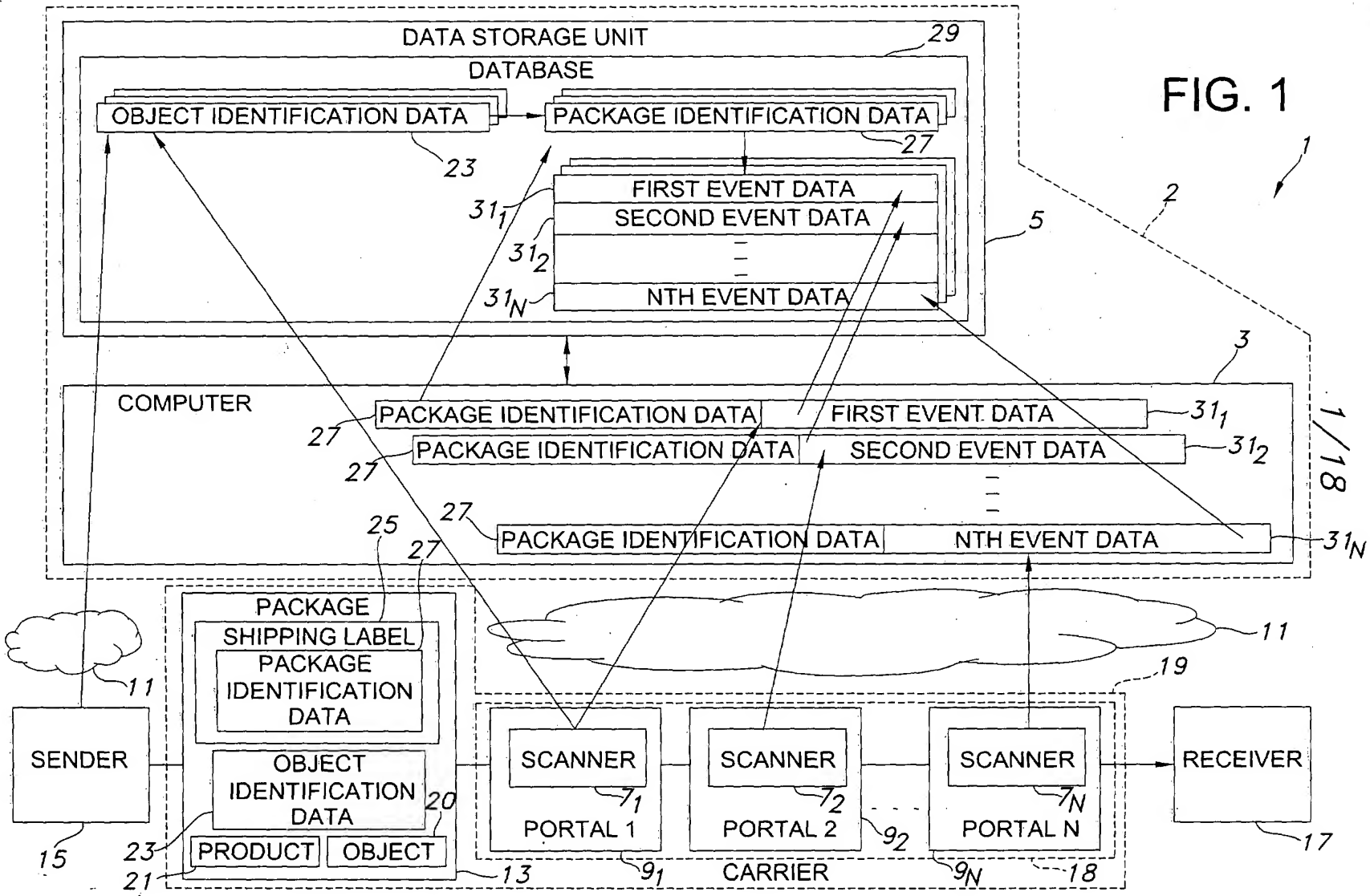


FIG. 1

Title: Methods, Systems, and Computer-Readable Media for Linking Object Identification Data to Package Identification Data
Inventors: Robert V. Nonneman, Robert Michael Peters
Atty Dkt No. 018360/261264

Title: Methods, Systems, and Computer-Readable Media for Linking Object Identification Data to Package Identification Data
Inventors: Robert V. Nonneman, Robert Michael Peters
Atty Dkt No. 018360/261264

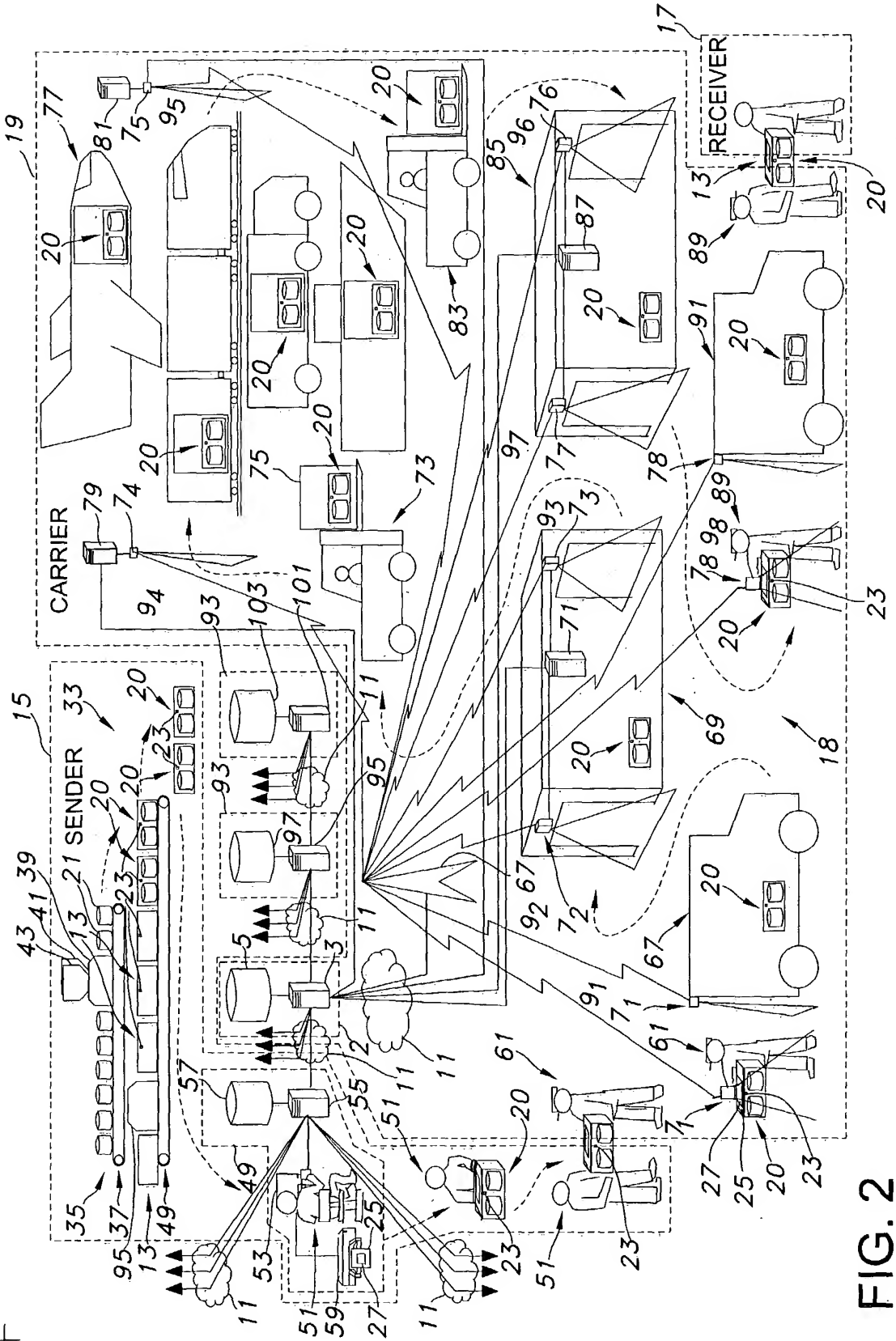
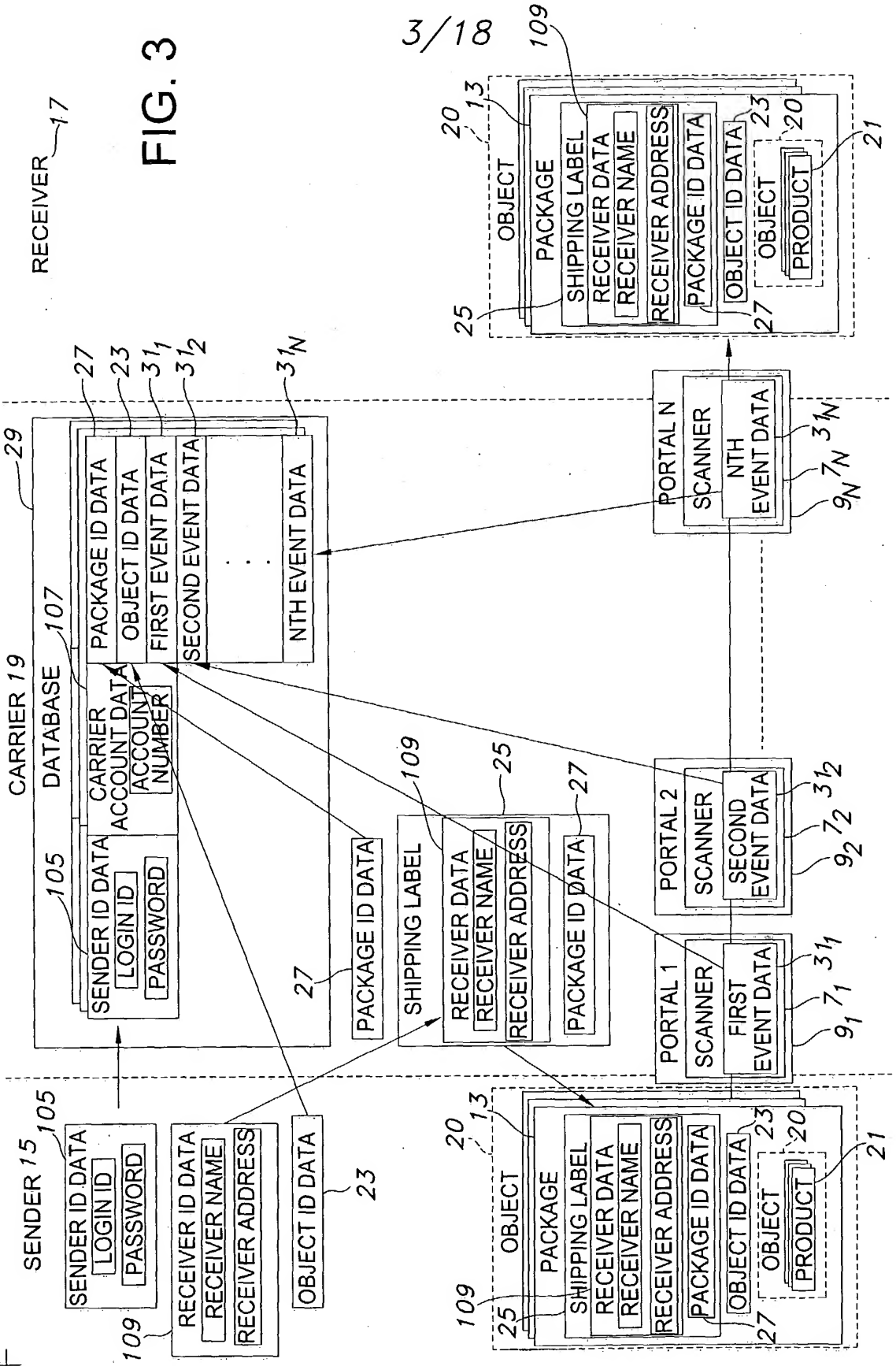


FIG. 2

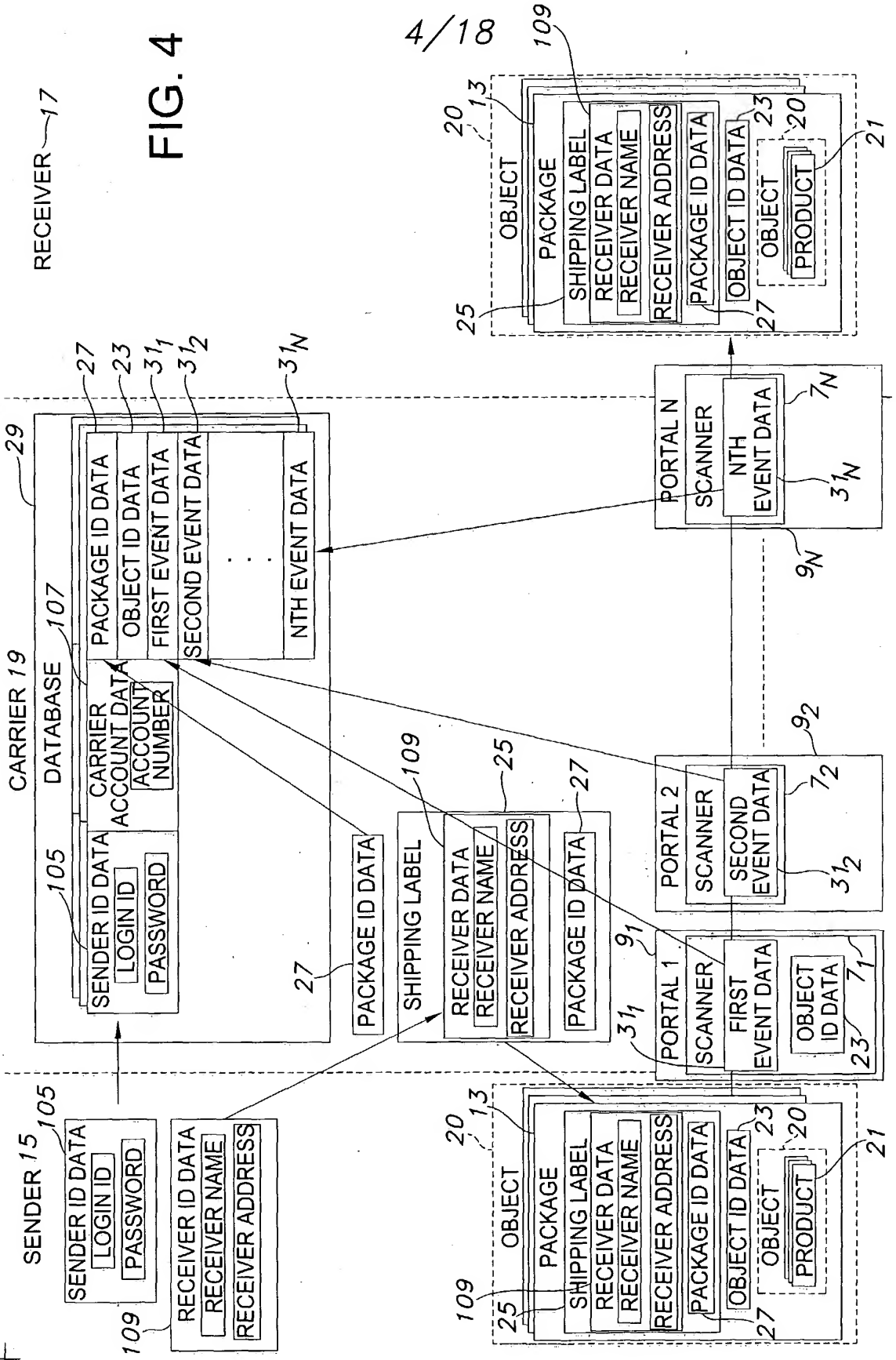
Title: Methods, Systems, and Computer-Readable Media for Linking Object Identification Data to Package Identification Data
Inventors: Robert V. Nonneman, Robert Michael Peters
Atty Dkt No. 018360/261264

FIG. 3



Title: Methods, Systems, and Computer-Readable Media for Linking Object Identification Data to Package Identification Data
Inventors: Robert V. Nonneman, Robert Michael Peters
Atty Dkt No. 018360/261264

FIG. 4



Title: Methods, Systems, and Computer-Readable Media for Linking Object Identification Data to Package Identification Data
Inventors: Robert V. Nonneman, Robert Michael Peters
Atty Dkt No. 018360/261264

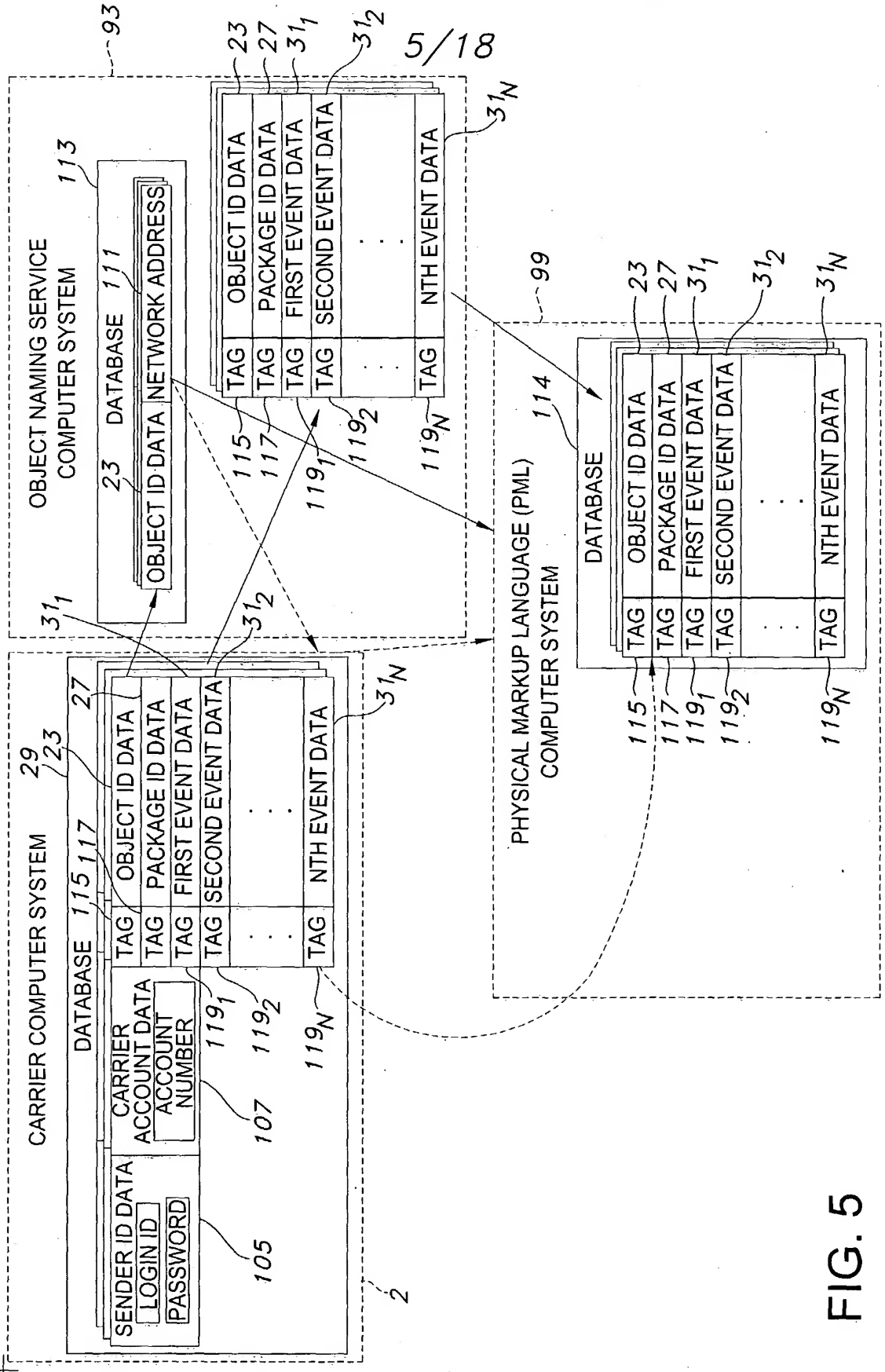


FIG. 5

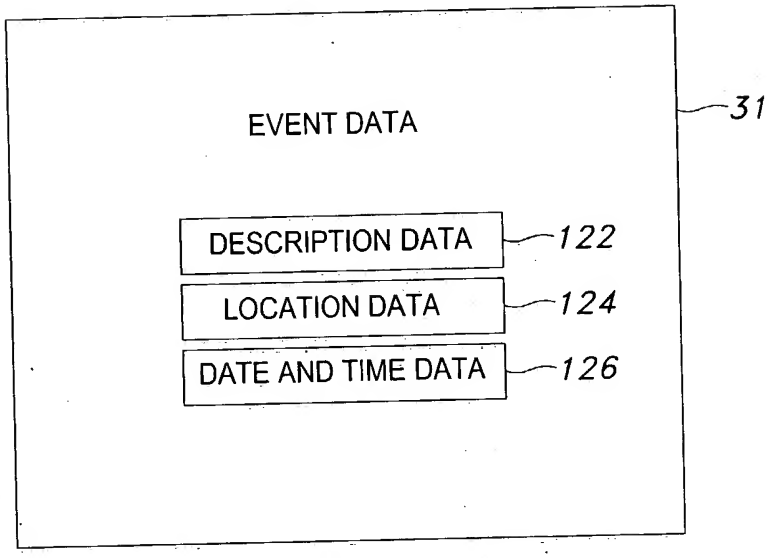

EVENT DATA
31
DESCRIPTION DATA
122
LOCATION DATA
124
DATE AND TIME DATA
126

FIG. 6

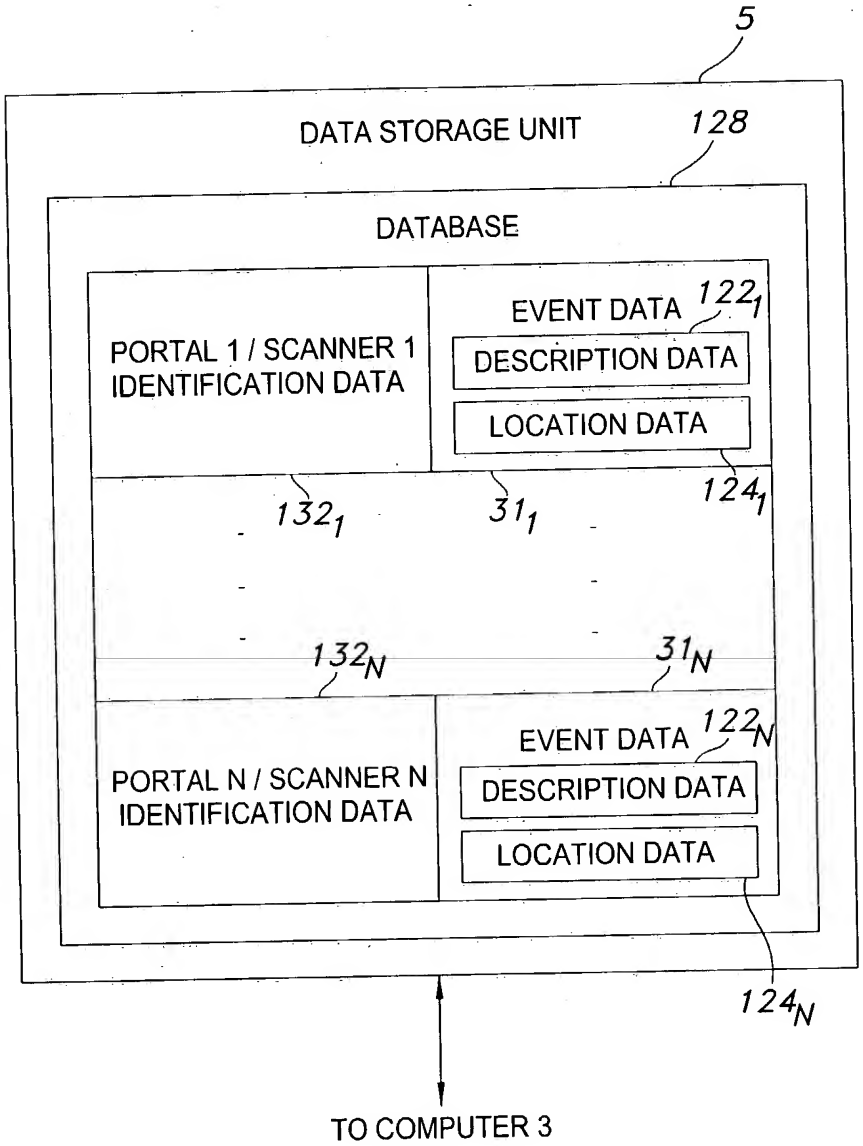

5
DATA STORAGE UNIT
128
DATABASE
PORTAL 1 / SCANNER 1 IDENTIFICATION DATA
EVENT DATA
122$_1$
DESCRIPTION DATA
LOCATION DATA
124$_1$
132$_1$
31$_1$
132$_N$
31$_N$
PORTAL N / SCANNER N IDENTIFICATION DATA
EVENT DATA
122$_N$
DESCRIPTION DATA
LOCATION DATA
124$_N$
TO COMPUTER 3

FIG. 7

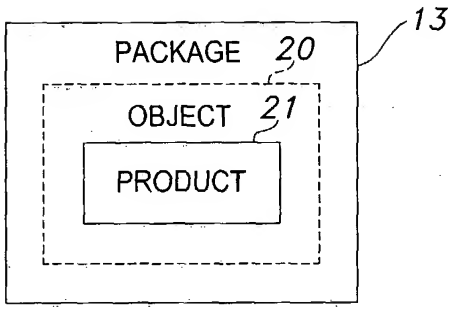


FIG. 8A

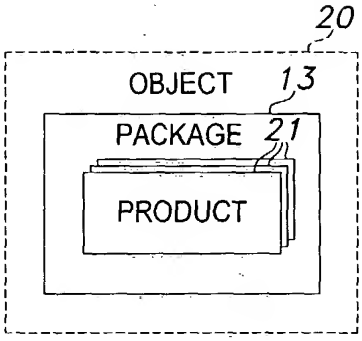


FIG. 8B

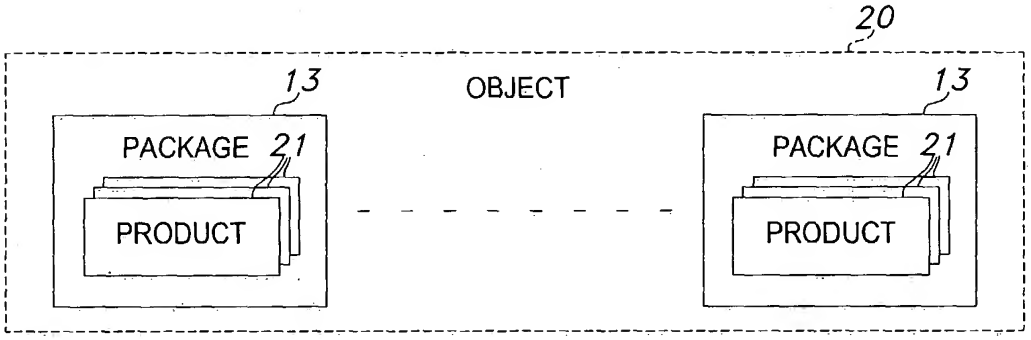


FIG. 8C

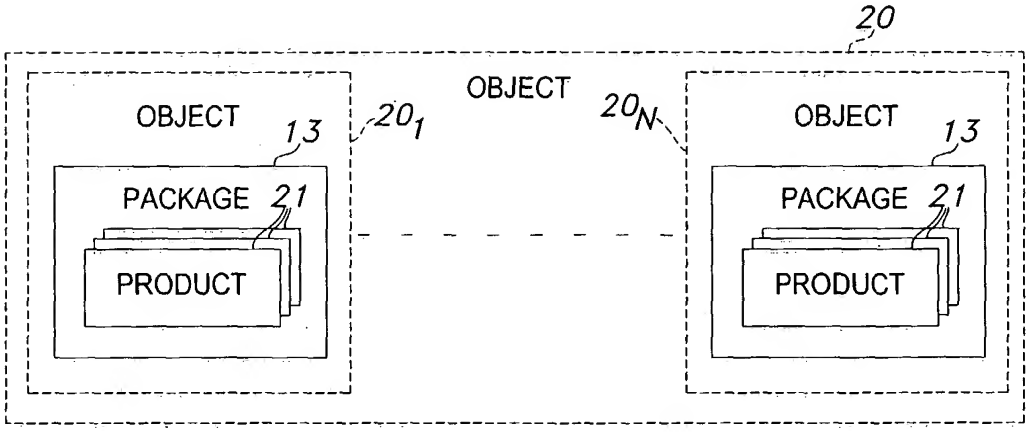


FIG. 8D

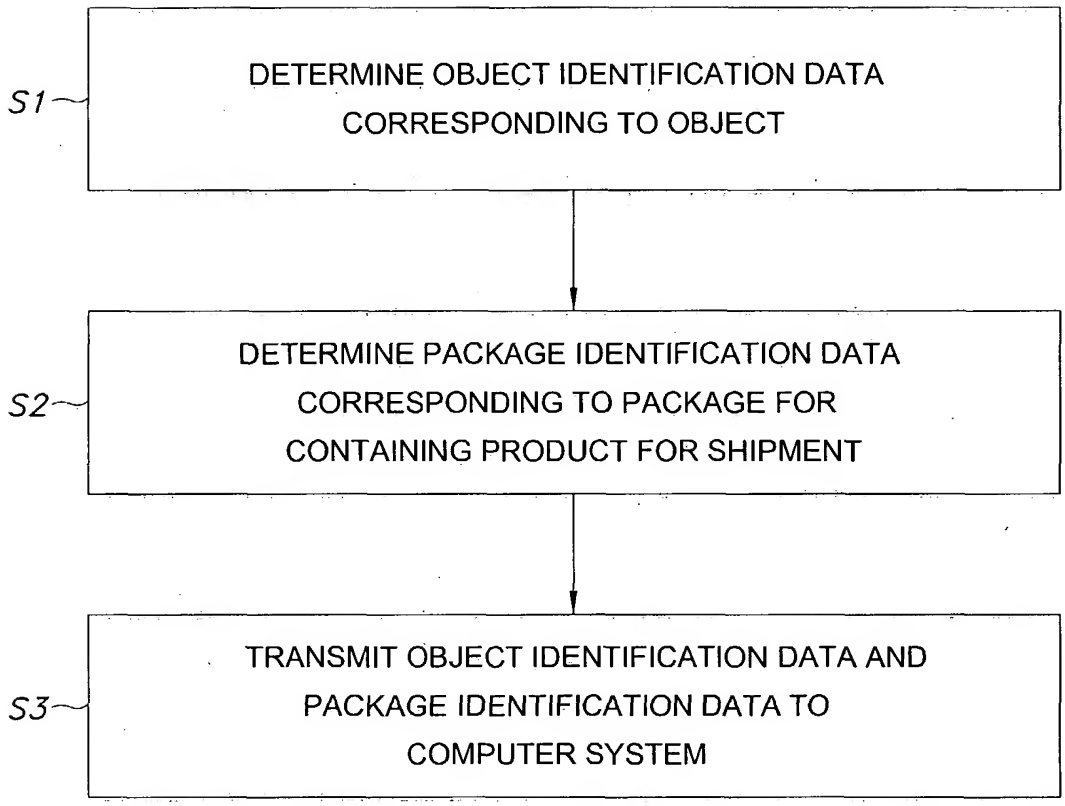

S1
DETERMINE OBJECT IDENTIFICATION DATA CORRESPONDING TO OBJECT
S2
DETERMINE PACKAGE IDENTIFICATION DATA CORRESPONDING TO PACKAGE FOR CONTAINING PRODUCT FOR SHIPMENT
S3
TRANSMIT OBJECT IDENTIFICATION DATA AND PACKAGE IDENTIFICATION DATA TO COMPUTER SYSTEM

FIG. 9

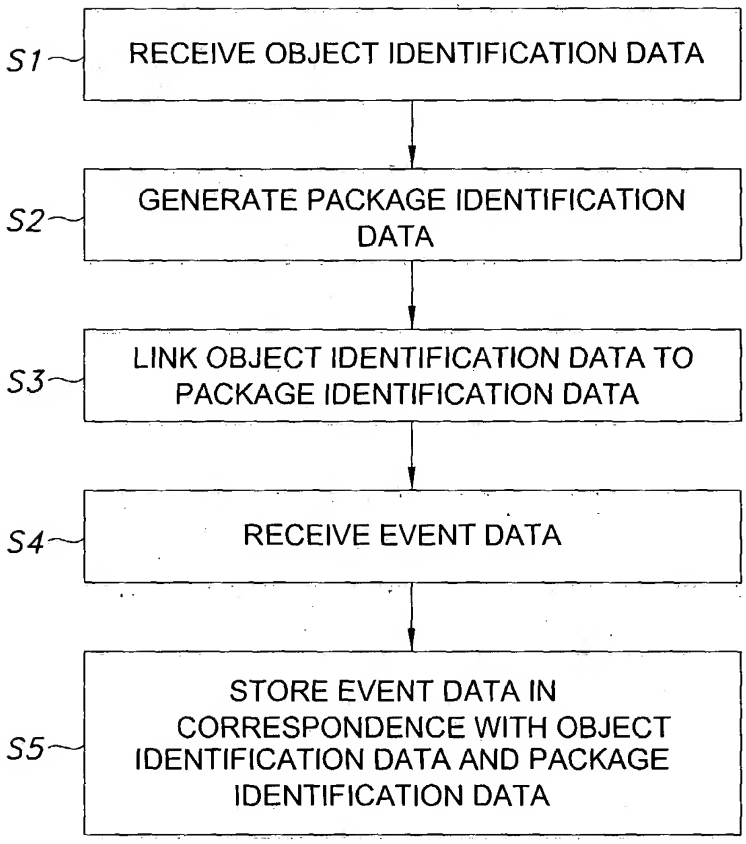

S1
RECEIVE OBJECT IDENTIFICATION DATA
S2
GENERATE PACKAGE IDENTIFICATION DATA
S3
LINK OBJECT IDENTIFICATION DATA TO PACKAGE IDENTIFICATION DATA
S4
RECEIVE EVENT DATA
S5
STORE EVENT DATA IN CORRESPONDENCE WITH OBJECT IDENTIFICATION DATA AND PACKAGE IDENTIFICATION DATA

FIG. 10

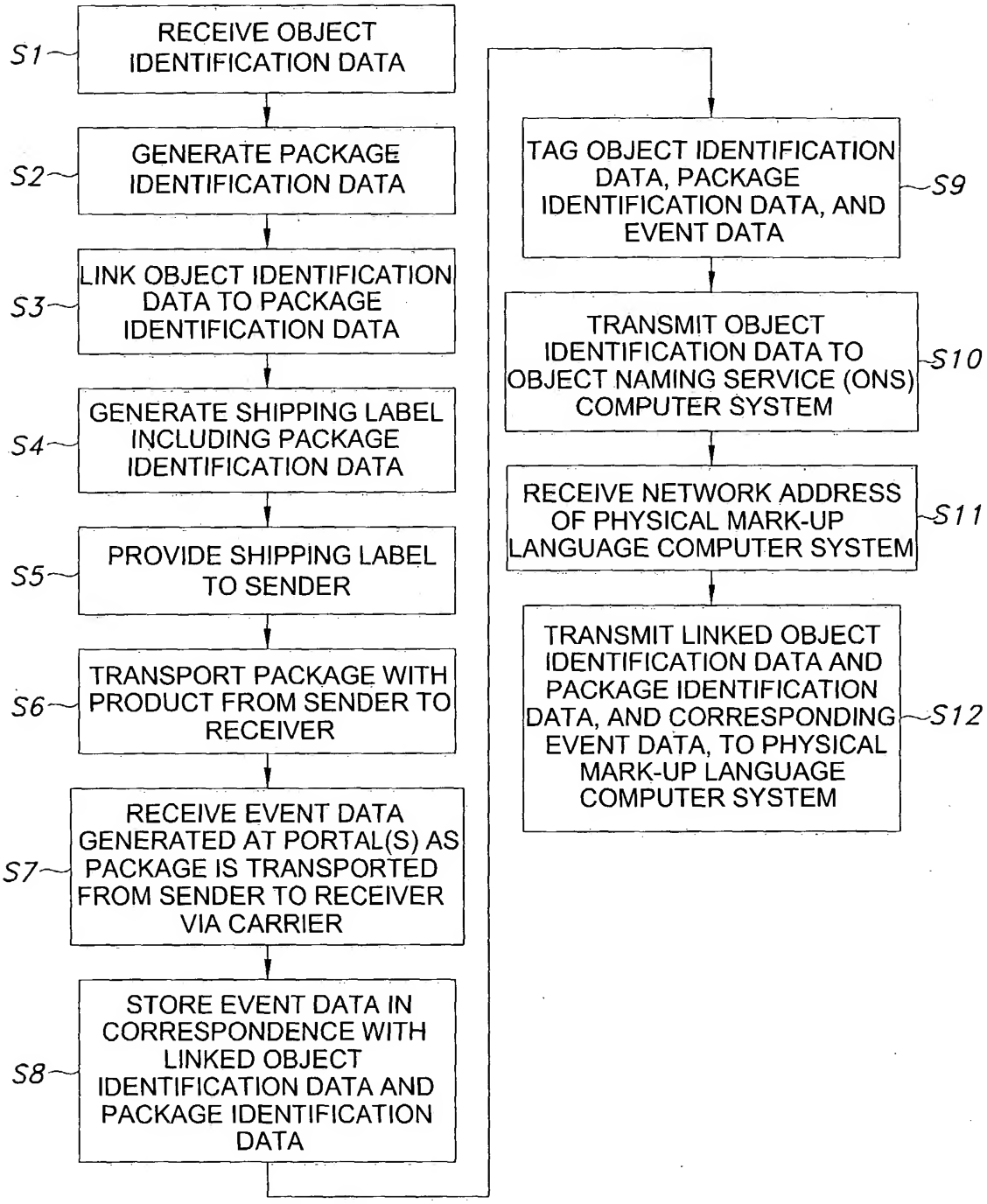

S1
RECEIVE OBJECT IDENTIFICATION DATA
S2
GENERATE PACKAGE IDENTIFICATION DATA
S3
LINK OBJECT IDENTIFICATION DATA TO PACKAGE IDENTIFICATION DATA
S4
GENERATE SHIPPING LABEL INCLUDING PACKAGE IDENTIFICATION DATA
S5
PROVIDE SHIPPING LABEL TO SENDER
S6
TRANSPORT PACKAGE WITH PRODUCT FROM SENDER TO RECEIVER
S7
RECEIVE EVENT DATA GENERATED AT PORTAL(S) AS PACKAGE IS TRANSPORTED FROM SENDER TO RECEIVER VIA CARRIER
S8
STORE EVENT DATA IN CORRESPONDENCE WITH LINKED OBJECT IDENTIFICATION DATA AND PACKAGE IDENTIFICATION DATA
S9
TAG OBJECT IDENTIFICATION DATA, PACKAGE IDENTIFICATION DATA, AND EVENT DATA
S10
TRANSMIT OBJECT IDENTIFICATION DATA TO OBJECT NAMING SERVICE (ONS) COMPUTER SYSTEM
S11
RECEIVE NETWORK ADDRESS OF PHYSICAL MARK-UP LANGUAGE COMPUTER SYSTEM
S12
TRANSMIT LINKED OBJECT IDENTIFICATION DATA AND PACKAGE IDENTIFICATION DATA, AND CORRESPONDING EVENT DATA, TO PHYSICAL MARK-UP LANGUAGE COMPUTER SYSTEM

FIG. 11

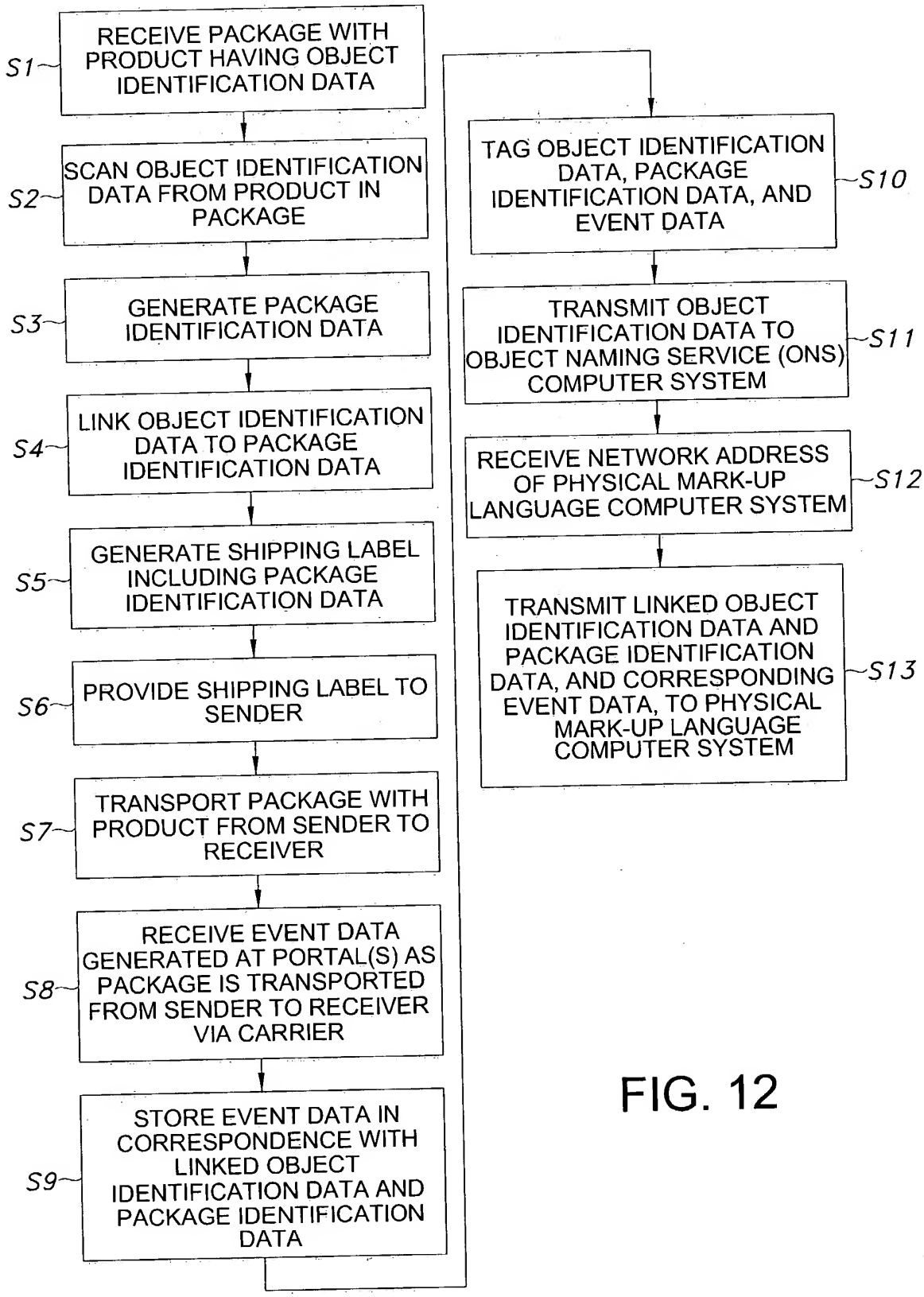

S1
RECEIVE PACKAGE WITH PRODUCT HAVING OBJECT IDENTIFICATION DATA
S2
SCAN OBJECT IDENTIFICATION DATA FROM PRODUCT IN PACKAGE
S3
GENERATE PACKAGE IDENTIFICATION DATA
S4
LINK OBJECT IDENTIFICATION DATA TO PACKAGE IDENTIFICATION DATA
S5
GENERATE SHIPPING LABEL INCLUDING PACKAGE IDENTIFICATION DATA
S6
PROVIDE SHIPPING LABEL TO SENDER
S7
TRANSPORT PACKAGE WITH PRODUCT FROM SENDER TO RECEIVER
S8
RECEIVE EVENT DATA GENERATED AT PORTAL(S) AS PACKAGE IS TRANSPORTED FROM SENDER TO RECEIVER VIA CARRIER
S9
STORE EVENT DATA IN CORRESPONDENCE WITH LINKED OBJECT IDENTIFICATION DATA AND PACKAGE IDENTIFICATION DATA
S10
TAG OBJECT IDENTIFICATION DATA, PACKAGE IDENTIFICATION DATA, AND EVENT DATA
S11
TRANSMIT OBJECT IDENTIFICATION DATA TO OBJECT NAMING SERVICE (ONS) COMPUTER SYSTEM
S12
RECEIVE NETWORK ADDRESS OF PHYSICAL MARK-UP LANGUAGE COMPUTER SYSTEM
S13
TRANSMIT LINKED OBJECT IDENTIFICATION DATA AND PACKAGE IDENTIFICATION DATA, AND CORRESPONDING EVENT DATA, TO PHYSICAL MARK-UP LANGUAGE COMPUTER SYSTEM

FIG. 12

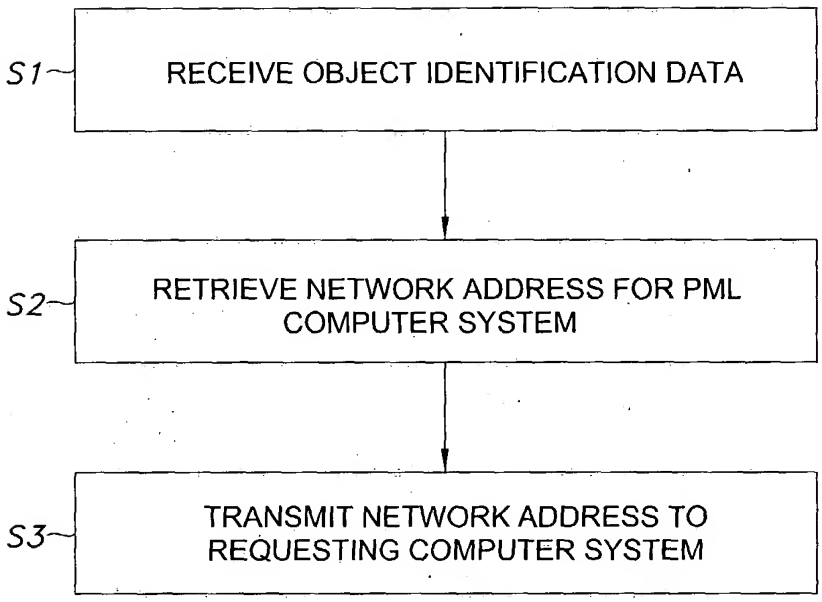

S1
RECEIVE OBJECT IDENTIFICATION DATA
S2
RETRIEVE NETWORK ADDRESS FOR PML COMPUTER SYSTEM
S3
TRANSMIT NETWORK ADDRESS TO REQUESTING COMPUTER SYSTEM

FIG. 13A

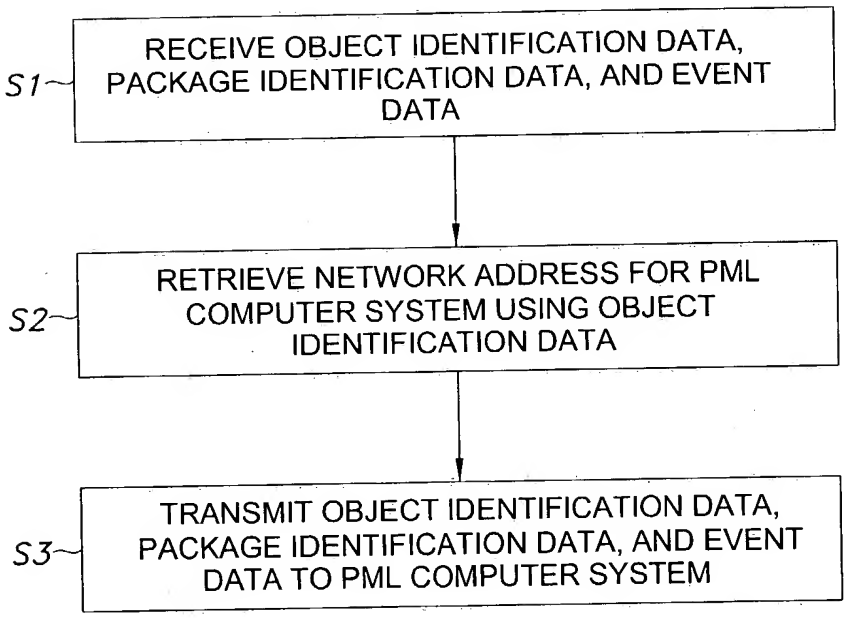

S1
RECEIVE OBJECT IDENTIFICATION DATA, PACKAGE IDENTIFICATION DATA, AND EVENT DATA
S2
RETRIEVE NETWORK ADDRESS FOR PML COMPUTER SYSTEM USING OBJECT IDENTIFICATION DATA
S3
TRANSMIT OBJECT IDENTIFICATION DATA, PACKAGE IDENTIFICATION DATA, AND EVENT DATA TO PML COMPUTER SYSTEM

FIG. 13B

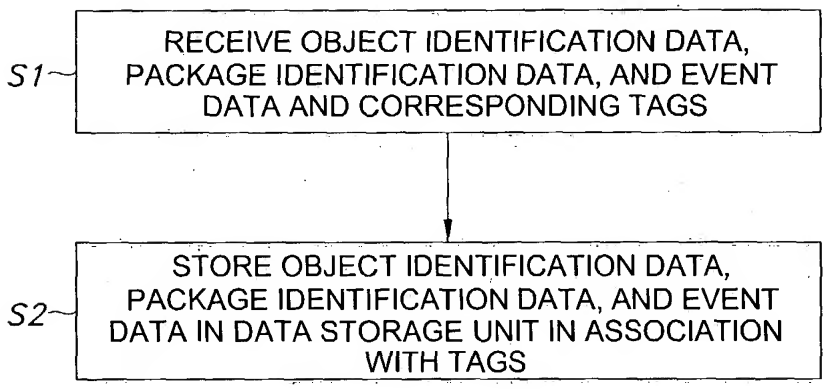

S1
RECEIVE OBJECT IDENTIFICATION DATA, PACKAGE IDENTIFICATION DATA, AND EVENT DATA AND CORRESPONDING TAGS
S2
STORE OBJECT IDENTIFICATION DATA, PACKAGE IDENTIFICATION DATA, AND EVENT DATA IN DATA STORAGE UNIT IN ASSOCIATION WITH TAGS

FIG. 14A

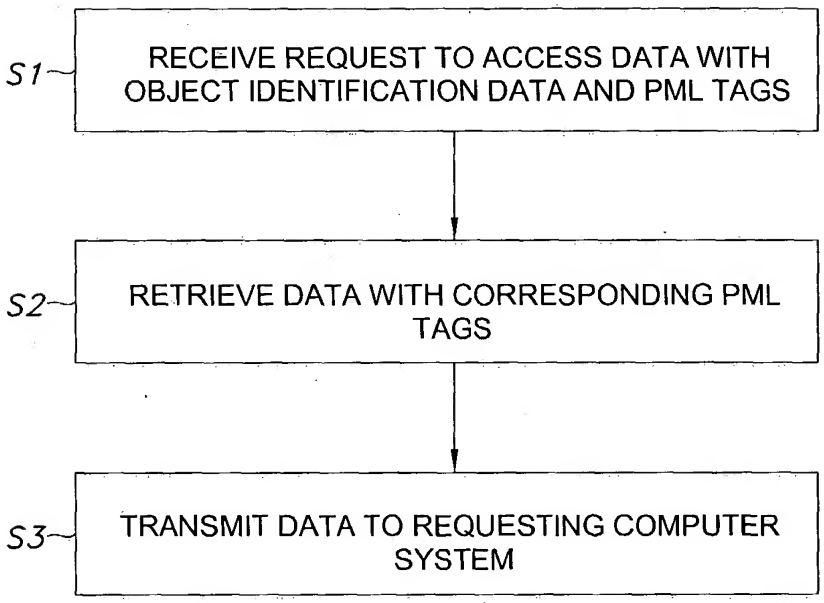

S1
RECEIVE REQUEST TO ACCESS DATA WITH OBJECT IDENTIFICATION DATA AND PML TAGS
S2
RETRIEVE DATA WITH CORRESPONDING PML TAGS
S3
TRANSMIT DATA TO REQUESTING COMPUTER SYSTEM

FIG. 14B

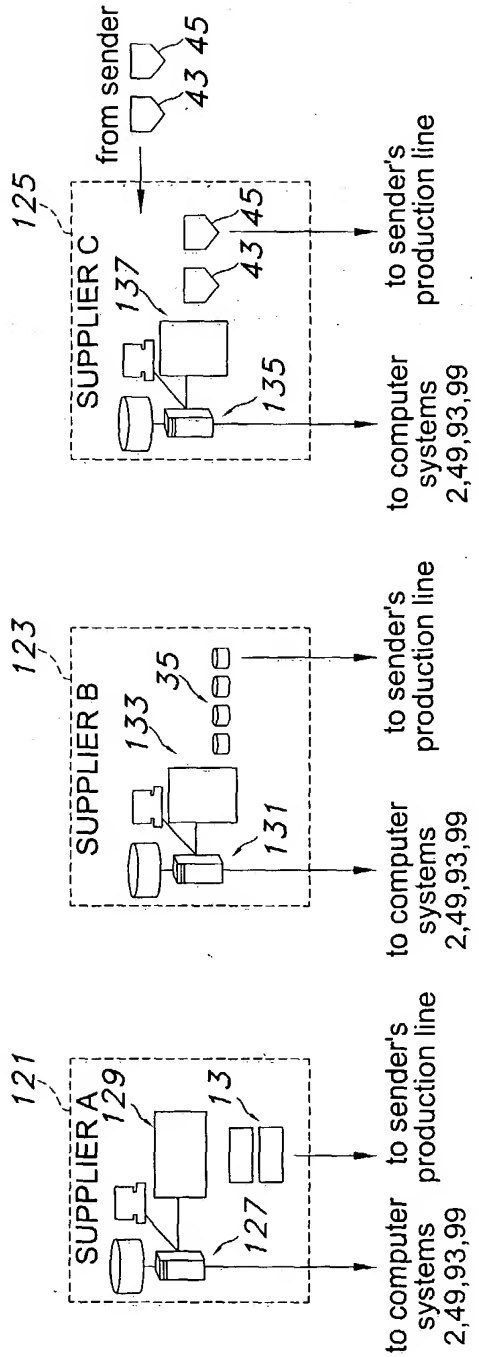

SUPPLIER A
121
129
13
127
to sender's production line
to computer systems 2,49,93,99
SUPPLIER B
123
133
35
131
to sender's production line
to computer systems 2,49,93,99
SUPPLIER C
125
137
135
43
45
from sender
to sender's production line
to computer systems 2,49,93,99

FIG. 15

Title: Methods, Systems, and Computer-Readable Media for Linking Object Identification Data to Package Identification Data
Inventors: Robert V. Nonneman, Robert Michael Peters
Atty Dkt No. 018360/261264

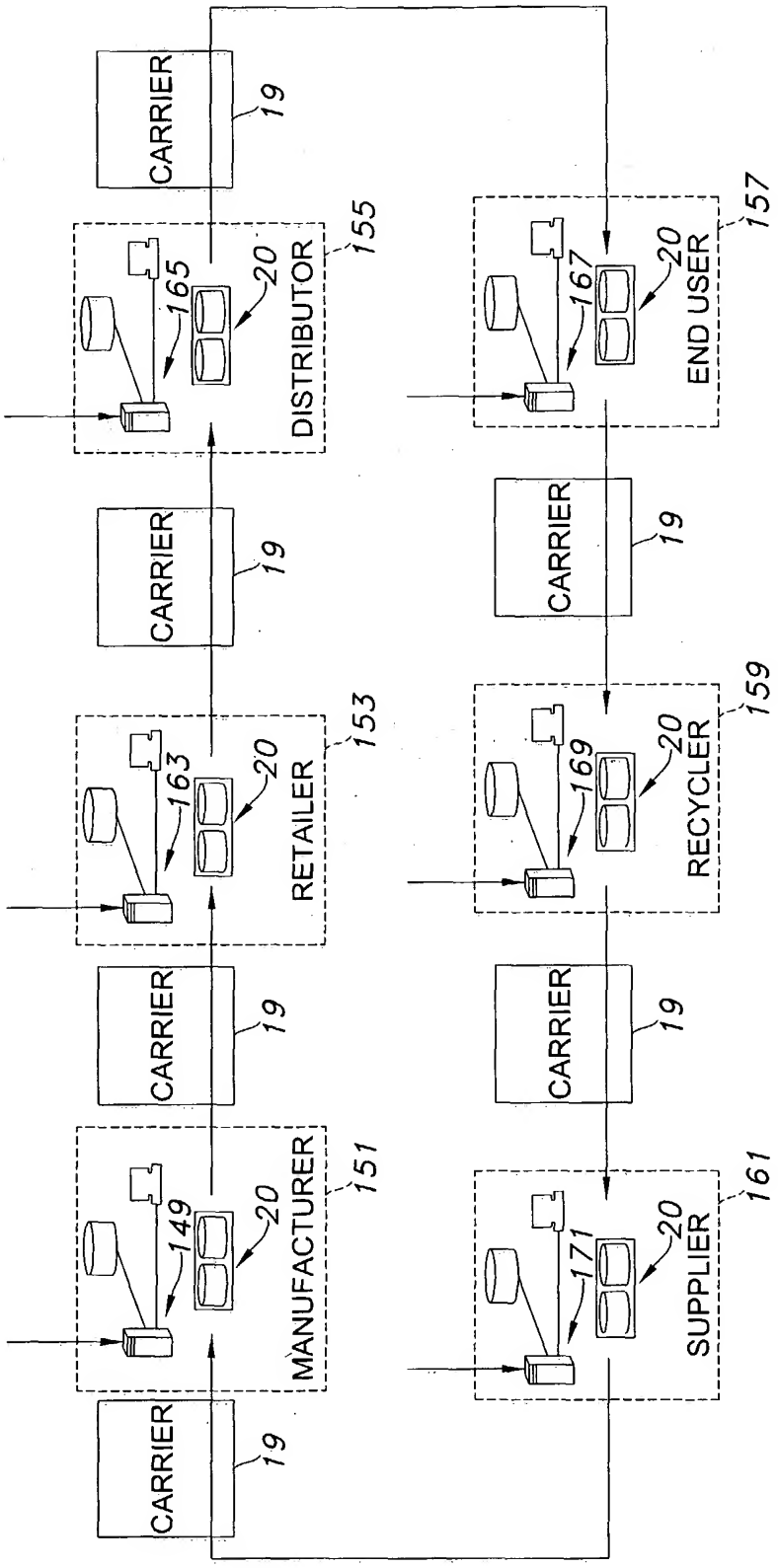


FIG. 16